Case of PUO, Psoas Abscess and Renal Failure

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Abstract

Pyrexia of unknown origin (PUO) is a common phenomenon. Abscesses are well known to present as PUO. We present a case of PUO due to psoas abscess and renal failure, with a rare manifestation of a common entity.

Introduction

Pyrexia of unknown origin is a common manifestation of abscesses, tuberculosis and malignancy. Abdominal abscesses are known to present as PUO. Tuberculosis of the spine presenting as psoas abscess is more commonly seen than reported. India has a high incidence of tuberculosis. However, psoas abscess may be due to varied reasons and empirical treatment may not be justifiable. We report the following case to exemplify the same.

Case History

A 37 yr old male farmer presented with history of low grade fever and low back pain for one month. With these complaints, he was evaluated by his physician. Haemogram and ESR were normal. Chest X-ray was unremarkable. CT scan of abdomen (Figure 1) showed collapse of third lumbar vertebra with large paravertebral and psoas abscess with bilateral sacroilitis. He was considered to have Koch’s spine and was started on rifampicin, isoniazid, pyrazinamide and ethambutol. After 3 weeks, the patient reported back with recurrent vomiting and was re-evaluated. He was found to have renal dysfunction (Serum creatinine 6.2 mg/dl). He was referred to our institute for the management of renal failure. There was history of weight loss of 6 kg in the past one month. He also had severe anorexia and malaise. There was no significant past history. Clinical examination was unremarkable. Evaluation showed hemoglobin of 9.1 gm/dl, with leukocyte count being 7800 cells/cumm. Other results were as follows: blood urea nitrogen-180mg/dl, creatinine 7.5mg/dl, ESR 36mm/hour, protein 8.0mg/dl, albumin 3.6 mg/dl, calcium 10.0mg/dl. His urine analysis had trace albuminuria and bland sediments. 24 hour urine protein was 1.7gm. Ultrasound of the abdomen was done, which revealed bilateral normal sized kidneys, and heterogeneous collection over psoas muscle. CT reconfirmed the findings of the first scan done elsewhere. Ultrasound guided aspiration of the psoas collection was done. The cytology smear showed atypical plasma cells (Figure 2). Bone marrow biopsy was reported to be multiple myeloma. Free light chain assay proved it to be a kappa light chain myeloma. Immunofixation electrophoresis showed it to be of IgG origin. He was having cast nephropathy on renal biopsy. He was treated with 5 sessions of plasmapheresis and chemotherapy. His urine output improved to 1.2-1.5 liter per day from 100-300 ml per day. He remained dialysis dependent. He had a refractory disease and died within eleven months of diagnosis.

Discussion

In the Indian subcontinent, tuberculosis is very common. With a young farmer presenting with these complaints, the probable diagnoses that need to be considered are tuberculosis, brucellosis, and psoas abscess. Psoas abscess can be due to bacterial, fungal, tubercular, polymicrobial.\textsuperscript{1} It can be primary or secondary (as in spinal tuberculosis, ruptured ceacum, genitourinary infection). Tuberculosis of the spine is a strong suspicion in this patient. However, the odd feature was advanced renal failure, with oligoanuria. Osteoarticular brucellosis is the most common presentation of systemic brucellosis. Lumbar spine is the most commonly affected area. \textsuperscript{2} Rifampicin, being active against Brucella species, can give the response and could conceal the disease. However, for brucellosis, it is usually used for duration of 6-8 weeks only. He was evaluated without any prejudice and was diagnosed to have multiple myeloma. Treating empirically in the initial period missed the opportunity for a correct and timely diagnosis in this patient.

The exact incidence of multiple myeloma in India is not known. The median age of Indian patients presenting with myeloma is 55 years, a decade less than that in the USA.\textsuperscript{3} India has the lowest incidence in Asian countries. The incidence of multiple myeloma in patients younger than forty years is only 2%.

Myeloma can involve gastrointestinal tract, Pleura, Testes, Skin, Peritoneum, Liver, Endocrine Organs, Lymph nodes.\textsuperscript{4} Unless there is evidence of any specific disease, in the larger interest of the patient, it is better to follow the age old principle, “culture what you biopsy and biopsy what you culture”. In this patient, aspirate was negative for acid fast bacilli. Bacterial culture of the aspirate was negative. Fungal and mycobacterial cultures were reported to be negative later on. The cells were confirmed to be of myeloid lineage by immunohistochemistry. He developed severe anemia later on and remained transfusion dependent. Though multiple myeloma was not suspected by us initially, methodical evaluation led us to the diagnosis.

Tuberculosis of spine presenting in a manner similar to our patient, in patients of multiple myeloma is reported.\textsuperscript{5} A rare case of anaplastic multiple myeloma affecting hip and thigh muscles in a known case of multiple myeloma, after a intramedullary nailing of an impending femoral fracture, is also reported.\textsuperscript{6}

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patient with known multiple myeloma on chemotherapy, having a relapse in the form of psoas abscess is reported.\textsuperscript{6} But the current presentation does not seem to be reported before. We presume, it may be underreported, as many cases of paraspinal abscesses with spine involvement, are usually empirically treated in clinical practice with no documentation on etiology or follow up or prognosis.

Conclusion

To conclude, we report a case of anaplastic myeloma with extramedullary extension into psoas muscle. Multiple myeloma has many facets and needs to be considered while evaluating relevant cases. Methodological evaluation is needed, rather than treating with intuition.

References